

Central Valley Flood Protection Board Update

August 26, 2016

Presented by:

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2017 ROADMAP



Today's Discussion

Where We've Been

- Effectiveness of Management Actions in Achieving Flood-Specific Outcomes

Where We Are

- CVFPP State Systemwide Investment Approach Refinements

Where We're Going

- State Systemwide Investment Approach (SSIA) Range of Investments Over Time





Where We've Been

Effectiveness of Management Actions in Achieving Flood-Specific Outcomes

CVFPP Goals Mapped to Broader Societal Outcomes in 2017 Update

CVFPP GOALS	SOCIETAL OUTCOMES
Primary Goal: Improve flood risk management	
Reduce the chance of flooding	  
Reduce damages once flooding occurs	
Improve public safety, preparedness, and emergency response	
Supporting Goals	
Improve Operations and Maintenance	  
Promote Ecosystem Functions	   
Promote Multi-benefit Projects	   
Improve Institutional Support	   
 Public Safety	 Economic Stability
 Ecosystem Vitality	 Enriching Experiences

How CVFPP Goals Align With Desired Societal Outcomes

CVFPP GOALS	PRIMARY	SUPPORTING	O&M, Ecosystem Institutional, Multi-benefit	
SOCIETAL OUTCOMES	Public Safety 	Ecosystem Vitality 	Economic Stability 	Enriching Experiences 

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SOCIETAL OUTCOMES

Public
Safety



Ecosystem
Vitality



Economic
Stability



Enriching
Experiences



SMALL COMMUNITIES CAPITAL IMPROVEMENTS

Levee and Infrastructure Improvements



Setbacks, Land Acquisitions,
and Habitat Restoration



SMALL COMMUNITIES ONGOING IMPROVEMENTS

Risk Awareness, Floodproofing
and Land Use Planning



Studies and Analysis








Routine Maintenance



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OUTCOME CONTRIBUTION LEVEL

-  High potential contribution to this outcome
-  Moderate to high potential contribution to this outcome
-  Moderate potential contribution to this outcome
-  Low potential contribution to this outcome
-  No potential contribution to this outcome

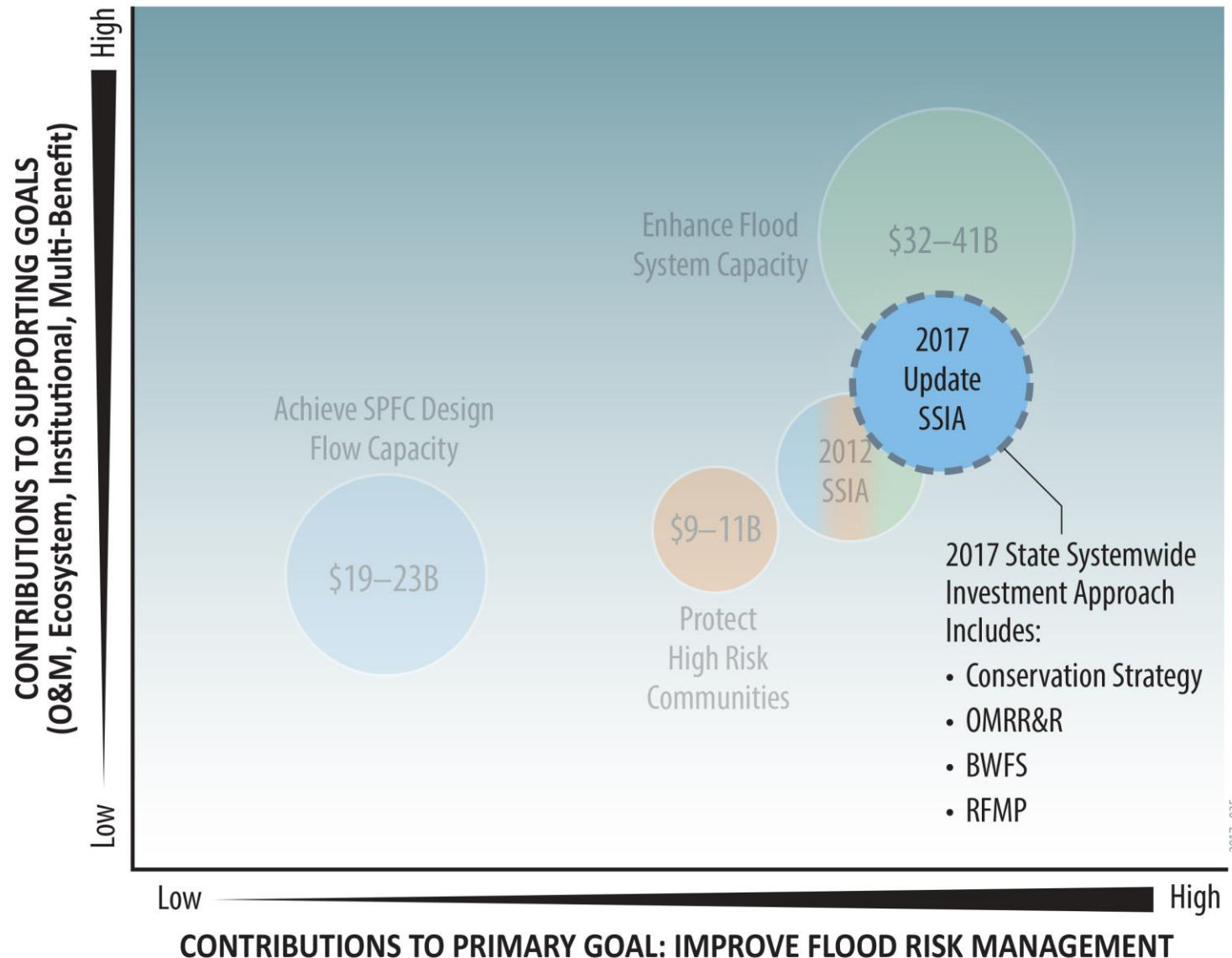
Intended Outcomes from
Small Community Actions

Where We Are

CVFPP State Systemwide Investment Approach Refinements



Refinements to the State Systemwide Investment Approach in 2017



Physical and Operational Elements in SSIA

Table 3-2 Major Physical and Operational Elements of Preliminary Approaches and State Systemwide Investment Approach, 2012 CVFPP

FLOOD MANAGEMENT ELEMENT	PROJECT LOCATION OR REQUIRED COMPONENTS	ACHIEVE SPFC DESIGN FLOW CAPACITY	PROTECT HIGH RISK COMMUNITIES	ENHANCE FLOOD SYSTEM CAPACITY		STATE SYSTEMWIDE INVESTMENT APPROACH
Urban Improvements						
Target 200-Year Level of Protection	Selected projects developed by local agencies, State, federal partners		YES	YES	→	YES
Target SPFC Design Capacity	Urban Levee Evaluations Project results	YES ²				

- Systemwide
- Urban
- Rural
- Small Community

2017 Refinements to SSIA

2012 SSIA		2017 SSIA Refinements	
Flood Management Element	Project Location or Required Components	Management Action Categories Used in 2017 CVFPP	Summary of Refinements in 2017 CVFPP Update
<i>Urban: Capital Improvements</i>			
Target 200-year Level of Protection	Selected projects developed by local agencies, State, federal partners	Levee Improvements; Other Infrastructure Improvements	Potential urban improvements updated considering implementation progress for State-federal projects during last 5 years and recommendations of RFMPs
Non-SPFC Urban Levee Improvements	Includes approximately 120 miles of non-SPFC levees that are closely associated with SPFC urban levees. Performance of these non-SPFC levees may affect the performance of SPFC levees		

Table 3-3 Refinements to Physical and Operational Elements in the State Systemwide Investment Approach, 2017 Update to the CVFPP

Refinements by Area of Interest



Sources Considered for Action and Cost Estimate Refinements

- Basin-wide Feasibility Studies
- Regional Flood Management Plans
- State-Federal Feasibility Studies
- OMRR&R Workgroup and Technical Memorandum
- Implementation Programs (e.g., Small Communities Program)

Area of Interest: Systemwide

Capital Investment	Ongoing Investment
<i>Systemwide</i>	
Yolo Bypass	State Operations, Planning & Performance Tracking
Feather River-Sutter Bypass Improvements	Emergency Management
Paradise Cut	Reservoir Operations
Reservoir & Floodplain Storage	

Area of Interest: Urban

Capital Investment	Ongoing Investment
<i>Urban</i>	
Levee Improvements	Risk Awareness, Floodproofing & Land Use Planning
Other Infrastructure & Habitat Improvements	Studies & Analysis
	Routine Maintenance

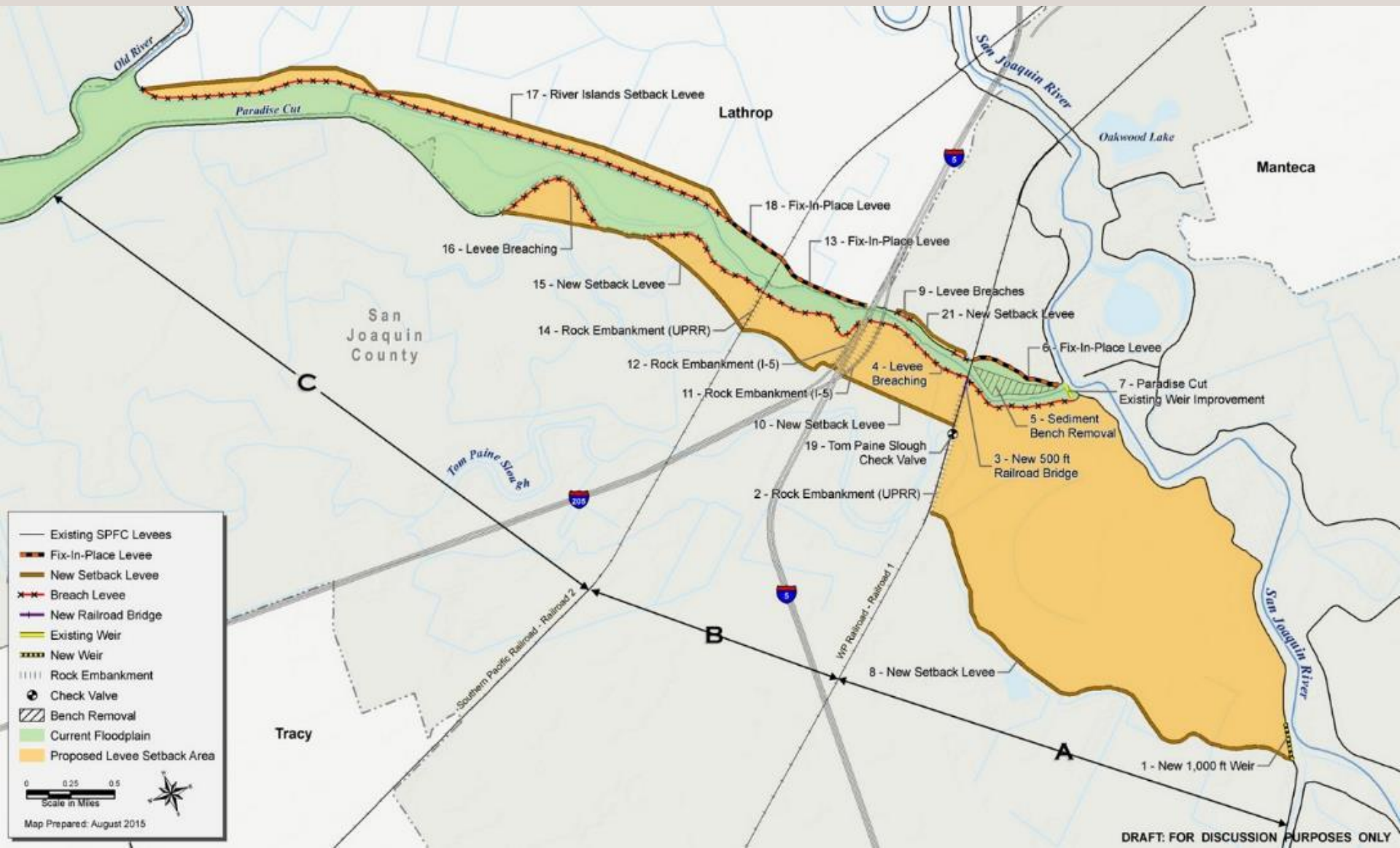
Area of Interest: Rural

Capital Investment	Ongoing Investment
<i>Rural</i>	
Levee and Infrastructure Improvements	Risk Awareness, Floodproofing & Land Use Planning
Setbacks, Bypasses & Floodplain Storage	Studies & Analysis
Land Acquisitions & Easements	Routine Maintenance
Habitat Restoration/Reconnection	

Area of Interest: Small Community

Capital Investment	Ongoing Investment
<i>Small Communities</i>	
Levee & Infrastructure Improvements	Risk Awareness, Floodproofing & Land Use Planning
Setbacks, Land Acquisitions & Habitat Restoration	Studies & Analysis
	Routine Maintenance

Proposed Paradise Cut Expansion



Where We're Going

State Systemwide Investment Approach (SSIA) Range of Investments Over Time

2012 SSIA Phased Investments

Table 4-3. State Systemwide Investment Approach Range of Investments over Time (\$ millions)

		FLOOD EMERGENCY RESPONSE		FLOOD SYSTEM OPERATIONS AND MAINTENANCE		FLOODPLAIN RISK MANAGEMENT		FLOOD SYSTEM ASSESSMENT, ENGINEERING, FEASIBILITY, AND PERMITTING		FLOOD RISK REDUCTION PROJECTS		TOTAL	
		Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
2007–2011	State	\$64		\$180		\$99		\$257		\$1,032		\$1,632	
	Federal ¹	–		–		–		\$160		\$620		\$780	
	Local	–		–		–		\$40		\$450		\$490	
	Subtotal	\$64		\$180		\$99		\$457		\$2,102		\$2,902	
2012–2017	State	\$130 to \$140		\$30 to \$60		\$30 to \$40		\$170 to \$200		\$1,140 to \$1,300		\$1,500 to \$1,730	
	Federal	–		\$20 to \$40		\$70 to \$90		\$230 to \$270		\$1,190 to \$1,340		\$1,500 to \$1,740	
	Local	–		\$10 to \$10		–		\$50 to \$60		\$140 to \$220		\$190 to \$290	
	Subtotal	\$130 to \$140		\$60 to \$110		\$100 to \$130		\$450 to \$530		\$2,470 to \$2,860		\$3,210 to \$3,770	
2018 and Beyond	State	\$290 to \$310		\$20 to \$50		\$60 to \$120		\$270 to \$420		\$2,630 to \$3,440		\$3,270 to \$4,340	
	Federal	–		\$130 to \$160		\$340 to \$450		\$590 to \$740		\$3,090 to \$4,020		\$4,150 to \$5,370	
	Local	–		\$50 to \$60		–		\$120 to \$150		\$230 to \$320		\$410 to \$530	
	Subtotal	\$290 to \$310		\$200 to \$270		\$400 to \$570		\$980 to \$1,310		\$5,950 to \$7,780		\$7,830 to \$10,240	
Total	State	\$480 to \$510		\$230 to \$290		\$190 to \$260		\$700 to \$880		\$4,800 to \$5,770		\$6,400 to \$7,700	
	Federal	–		\$150 to \$200		\$410 to \$540		\$980 to \$1,170		\$4,900 to \$5,980		\$6,430 to \$7,890	
	Local	–		\$60 to \$70		–		\$210 to \$250		\$820 to \$990		\$1,090 to \$1,310	
	Subtotal	\$480 to \$510		\$440 to \$560		\$600 to \$800		\$1,890 to \$2,300		\$10,520 to \$12,740		\$13,920 to \$16,910	

¹ Federal and local project cost-shares for 2007 – to 2011 were estimated.

Key:
State = State of California

*Provided by 2012 CVFPP

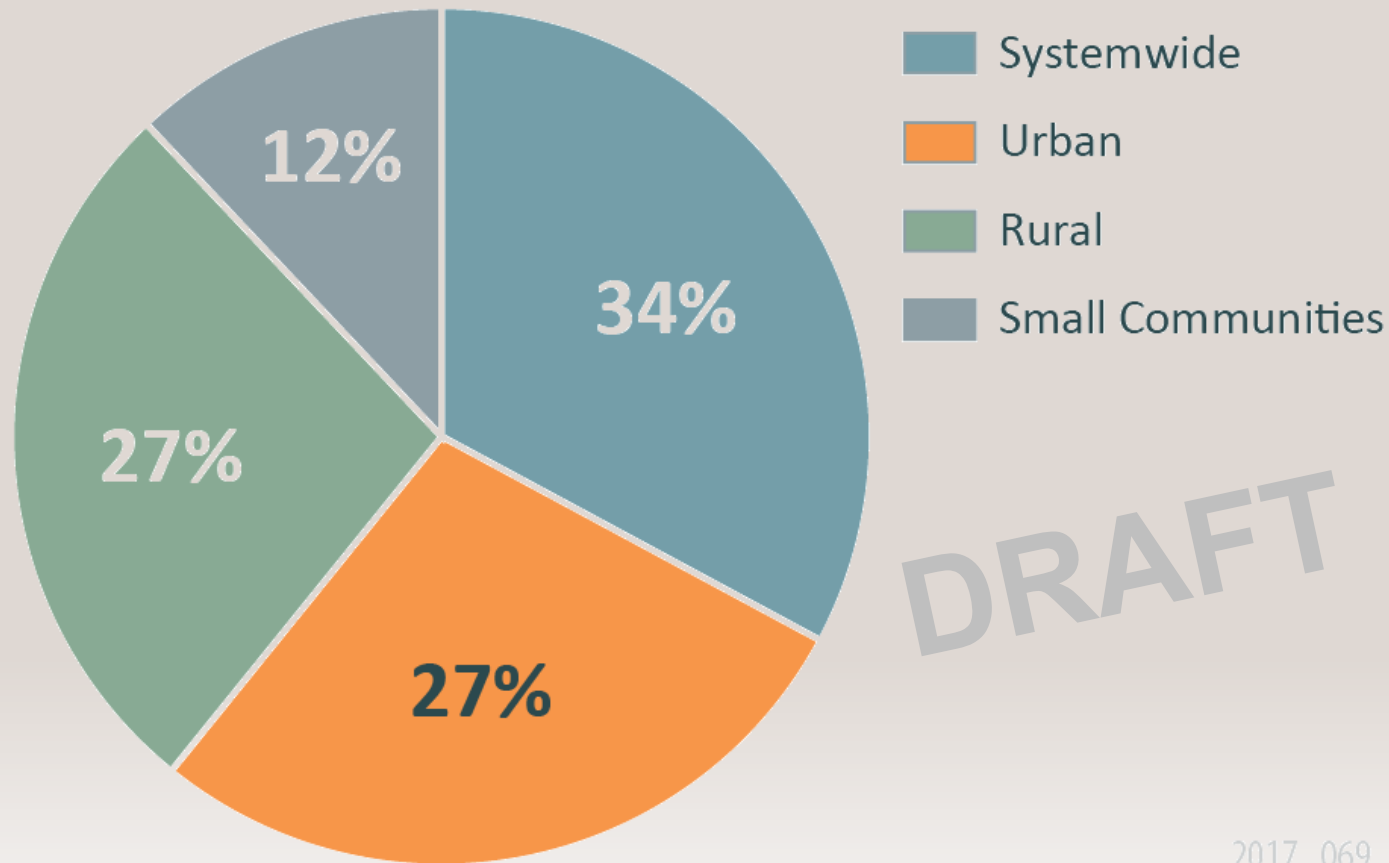


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Table 4-3. Total Capital and Ongoing Investments \$ in Millions

Area of Interest	Sacramento		San Joaquin		Total	
	Low (\$M)	High (\$M)	Low (\$M)	High (\$M)	Low (\$M)	High (\$M)
Systemwide	\$4,410	\$5,390	\$1,760	\$2,150	\$6,170	\$7,540
Urban	\$3,580	\$4,380	\$1,290	\$1,570	\$4,870	\$5,950
Rural	\$3,310	\$4,050	\$1,530	\$1,870	\$4,840	\$5,920
Small Community	\$1,900	\$2,330	\$330	\$400	\$2,230	\$2,730
Grand Total:	\$13,200	\$16,150	\$4,910	\$5,990	\$18,110	\$22,140

CVFPP Investments Spread Across Areas of Interest



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